Abstract

Iranian oil companies are developing the technique of Hydraulic Fracturing (HF) operation to enhance the hydrocarbon recovery of deep carbonate formations. However, there is not a computerized tool or well defined framework for Iranian carbonate oil fields to select candidates. The ineffective HF experiences in the past emphasized that candidate selection is the frontline of a victorious HF operation. This paper presents the development of a local programme to automatically select specific zones for special purposes like HF. The program is written in MATLAB in such a way to integrate large amount of data from different disciplines. In addition, the missing data are compensated with Neural Network and Fuzzy Logic techniques. In the end data are mechanically screened based on the user selected parameters, cut-offs and weight factors. Results of screening within the limitations are prioritized in stacked bars to make decision easier. This tool is applied for a purpose of candidate selection for HF in M oil field located in south of Iran. This field has 585 zones which each zone has more than 30 parameters form different disciplines. The result of this programming is printed schematically and it is conclusive to our clients.
A Local Computerized Multi-Screening of Vast Amount of Data to Select Hydraulic Fracturing Candidates in Iranian Carbonate Oil Fields

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**Index Terms**

Computer Science    Artificial Intelligence


**Keywords**
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- Carbonate Formation
- Hydraulic Fracturing
- Mechanical Screening
- Iran